Stream Protection and Management Program Implementation Plan

Commission on Water Resource Management
Department of Land and Natural Resources

July 27, 2005

Establishing an Instream Flow Program

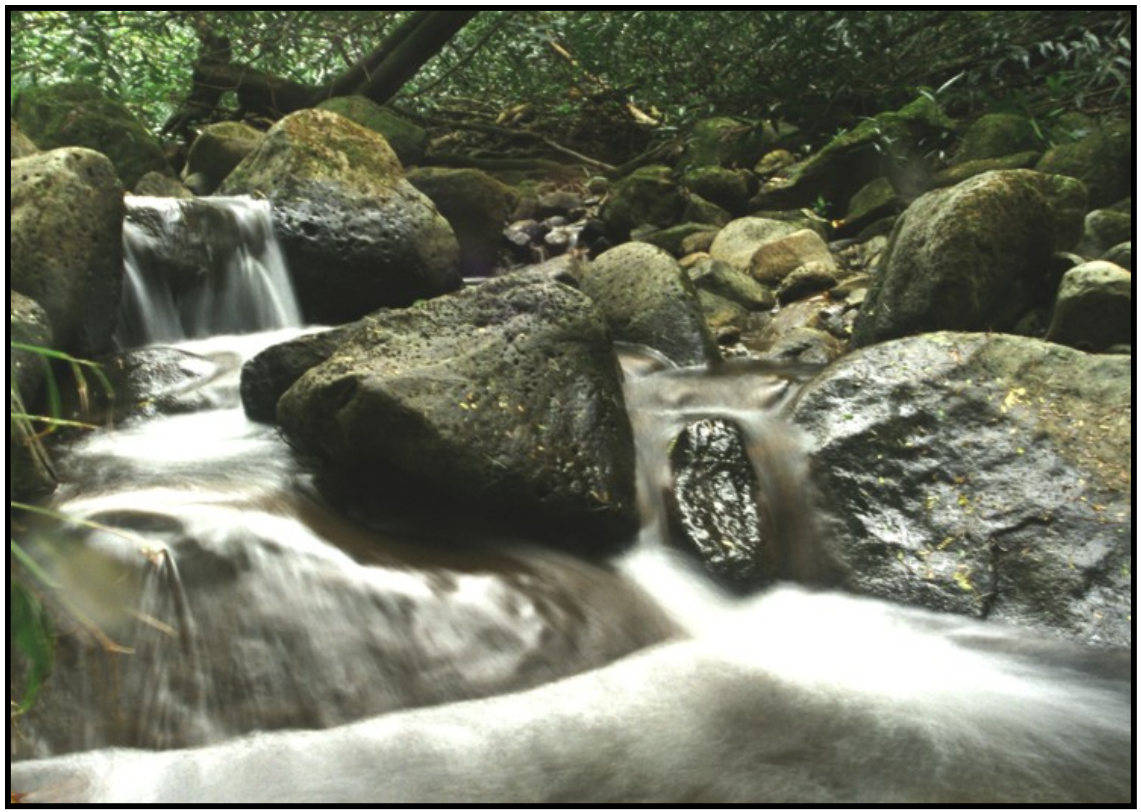
The State Water Code, Chapter 174C-71(4), HRS, directs the Commission to:

"Establish an instream flow program to protect, enhance, and reestablish, where practicable, beneficial instream uses of water. The commission shall conduct investigations and collect instream flow data including fishing, wildlife, aesthetic, recreational, water quality, and ecological information and basic streamflow characteristics necessary for determining instream flow requirements."

Program Implementation Plan

- ***Mission Statement***

  "Manage and Protect Hawaii's Surface-Water Resources through a Comprehensive Instream Use Protection Program and the Establishment of Instream Flow Standards."



Purpose

- **The Plan is a critical step to laying out the foundational elements that shall guide the Stream Protection and Management Program.**
- **The Plan seeks to provide consistency and transparency to the complexity of issues that the Commission is tasked with confronting.**
- **The Plan is intended to be a "living" document that shall be evaluated periodically over the course of each year, to identify tasks that have been completed, those that must be initiated, and any new tasks which need to be included.**
- **The Plan shall serve as a tracking mechanism for the overall progress of the Stream Protection and Management Program objectives.**

Additional requirements

- **The Plan shall support the requirements of the:**

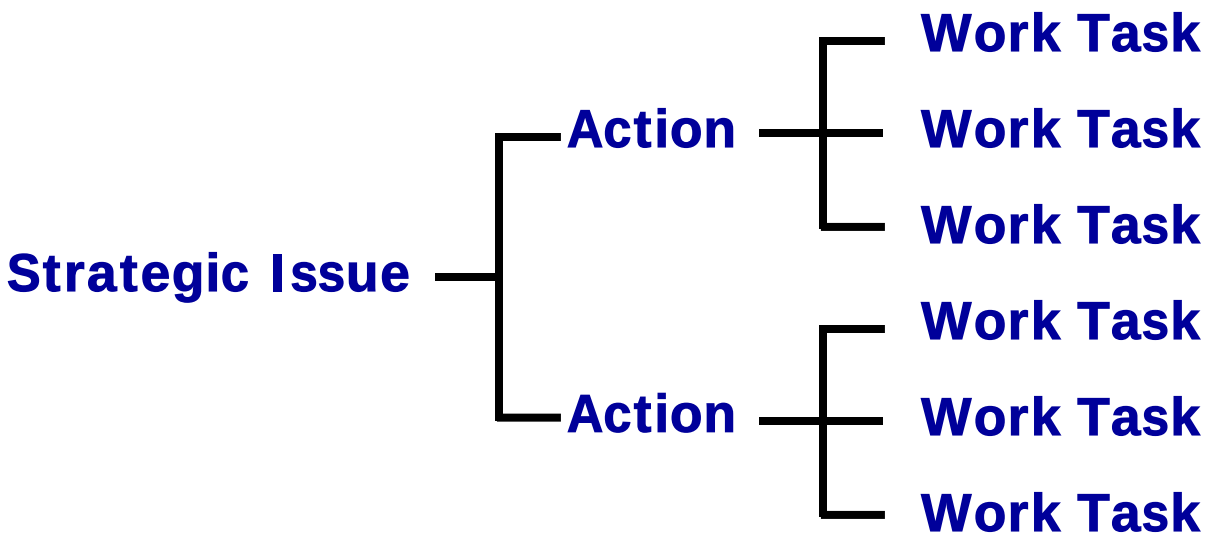
  1. **Annual Report to the Legislature on Identification of Rivers and Streams Worthy of Protection (Section 174C-31(c)(4), Hawaii Revised Statutes).**

  2. **House Concurrent Resolution 293, House Draft 1 of the 2005 Legislative Session, which requires the Commission to submit a report on the progress and findings in regards to fulfilling the Commission's constitutional and statutory mandate to protect public trust instream uses.**

Implementation Plan Goals

- **Establish and adopt clear working policies that lead to proactive resource management measures.**
- **Delineate and prioritize program objectives to improve information management and allocation of resources.**
- **Implement program objectives in a coordinated and phased approach to accomplish goals in a timely manner.**
- **Develop quantifiable interim instream flow standards, by surface-water hydrologic unit, based on best available information.**
- **Improve consistency and coordination between various surface-water program efforts and surface-water users to achieve greater efficiency and a better understanding of the resource.**

Implementation Plan Structure



Strategic Issue #1

- **Develop the necessary informational resources and processes to support the establishment of a standardized instream flow standard methodology.**
  - **Action #1: Establish CWRM Surface-Water Hydrologic Units**
  - **Action #2: Improve the processing of permit applications and management of permit information through the revision and enhancement of application forms.**
  - **Action #3: Improve the management and utilization of surface water-related information through the development of information databases.**
  - **Action #4: Enhance the management of surface water-related information spatially through the development of GIS databases.**
  - **Action #5: Develop a standardized interim instream flow standard methodology.**
  - **Action #6: Conduct field investigations to verify and update surface-water uses and information.**

Action #1

- **Establish CWRM Surface-Water Hydrologic Units**
  - **Work Task #1: Address Department of Health Concerns.**
  - **Work Task #2: Finalize Technical Report on Surface-Water Hydrologic Units.**
  - **Work Task #3: Continue coordination with DOH in developing a DOH watershed coding system.**
  - **Work Task #4: Integrate the Surface-Water Hydrologic Units coding into the Database Development.**

Action #2

- **Improve the processing of permit applications and management of permit information through the revision and enhancement of application forms.**
  - **Work Task #1: Revise Stream Diversion Works Permit Form**
  - **Work Task #2: Create Stream Diversion Works Completion Form**
  - **Work Task #3: Revise Stream Channel Alteration Permit Form.**
  - **Work Task #4: Revise Stream Channel Alteration Permit Completion Form.**
  - **Work Task #5: Create Permit Tracking Form.**
  - **Work Task #6: Create Request for Determination Form.**
  - **Work Task #7: Create Ownership Transfer Form.**
  - **Work Task #8: Create Permit Extension Form.**
  - **Work Task #9: Finalize forms with Commission staff edits.**
  - **Work Task #10: Identify the procedures necessary to implement the use of the revised forms.**
  - **Work Task #11: Present form revisions to the Commission.**
  - **Work Task #12: Print forms and post to CWRM website.**

Action #3

- **Improve the management and utilization of surface water-related information through the development of information databases.**
  - **Work Task #1: Hawaii Stream Assessment Database.**
  - **Work Task #2: Registration/Declaration Database.**
  - **Work Task #3: Surface-Water Information Database.**
  - **Work Task #4: Stream Diversion Works Database.**
  - **Work Task #5: Stream Channel Alteration Database.**
  - **Work Task #6: Request for Determination Database.**

Action #4

- **Enhance the management of surface water-related information spatially through the development of GIS databases.**
  - **Work Task #1: Statewide Streams.**
  - **Work Task #2: Stream Diversions.**
  - **Work Task #3: Stream Channel Alteration Permits.**
  - **Work Task #4: Statewide Irrigation Systems.**

Action #5

- **Develop a standardized interim instream flow standard methodology.**
  - **Work Task #1: Spreadsheet-based interim instream flow standard methodology.**
  - **Work Task #2: Expand assessment and review of spreadsheet-based IIFS methodology.**
  - **Work Task #3: Implement GIS-based interim instream flow standard methodology.**

Action #6

- **Conduct field investigations to verify and update surface-water uses and information.**
  - **Work Task #1: Conduct a preliminary survey of registered stream diversions for Oahu.**
  - **Work Task #2: Conduct an analysis of registered diversions to develop a prioritized survey/field inspection schedule.**
  - **Work Task #3: Conduct field investigations on Oahu to develop a standardized field investigation method and form.**
  - **Work Task #4: Expand field investigations to Maui, Kauai, Molokai, and Hawaii.**
  - **Work Task #5: Enhance support of the Department's Division of Aquatic Resources in conducting stream surveys and implementation of a stream survey database.**

Strategic Issue #2

- **Improve understanding of program issues and enhance coordination of program activities to more effectively promote the objectives of the Stream Protection and Management Program.**
  - **Action #1: Identify surface-water policies and establish a surface-water policy framework.**
  - **Action #2: Identify and review all current surface water-related projects to maintain appropriate coordination and management.**
  - **Action #3: Improve public outreach and education efforts to convey information more effectively.**

Action #1

- **Identify surface-water policies and establish a surface water policy framework.**
  - **Work Task #1: Conduct internal meetings to identify various surface water-related policies.**
  - **Work Task #2: Draft a surface-water policy framework document.**
  - **Work Task #3: Initiate development of a stream permitting guidebook.**
  - **Work Task #4: Initiate discussions to develop a process for determining appurtenant rights.**

Action #2

- **Identify and review all current surface water-related projects to maintain appropriate coordination and management.**
  - **Work Task #1: Implement technology transfer of GIS-based stream biology model in coordination with Dr. James Parham and the Division of Aquatic Resources.**
  - **Work Task #2: Continue coordination with Dr. James Parham and the Division of Aquatic Resources in the development of a GIS-based hydrology model.**
  - **Work Task #3: Continue coordination with the U.S. Geological Survey in the completion of the East Maui Stream Study.**
  - **Work Task #4: Continue coordination with Bishop Museum and Kamehameha Schools in the implementation of the Lalakea Alternative Mitigation Plan Project.**
  - **Work Task #5: Identify and prioritize future studies.**
  - **Work Task #6: Enhance support of watershed and stream protection partnerships, alliances, and programs.**

Action #3

- **Improve public outreach and education efforts to convey information more effectively.**
  - **Work Task #1: Complete development of the Stream Protection and Management Program website.**
  - **Work Task #2: Develop an informational Stream Protection and Management Program brochure.**
  - **Work Task #3: Conduct inter-island community workshops to discuss and inform the public about the instream flow standard process.**

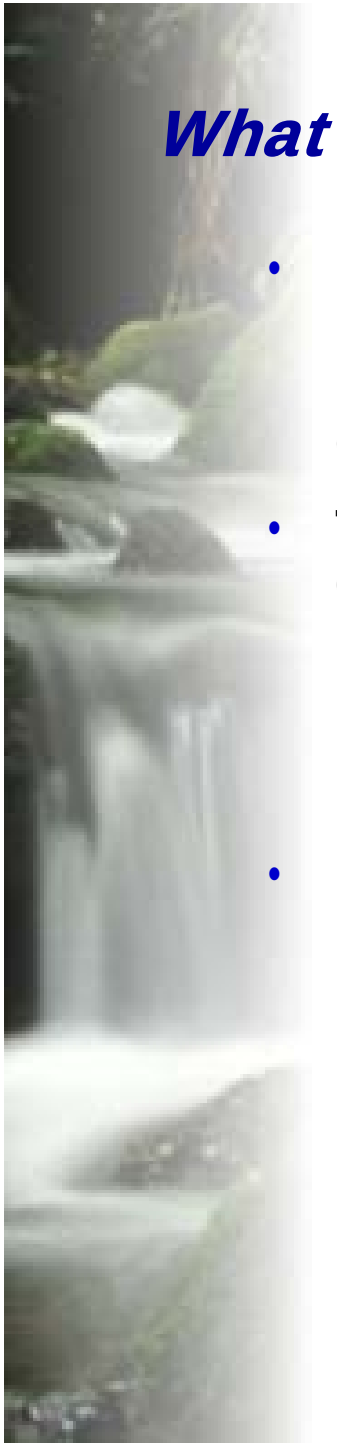
Program Implementation Plan Issues

- **The actions and tasks outlined in the Plan are not intended to be fully comprehensive or complete.**
- **Additional actions and tasks will be included in future Plan evaluations as intended by a "living" document approach.**
- **Keep in mind that the SPAM Branch is only comprised of three individuals.**
- **Ultimately, Plan implementation may require re-prioritization of program or Division activities and/or appropriation of continued funding.**
- **The Commission staff will continue to seek partnerships through interagency cooperative agreements, community initiatives, and available grant funding.**

What are instream flow standards?

- **Instream flow standards describe the flows necessary to protect adequately fishery, wildlife, aesthetic, scenic, or other beneficial instream uses.**

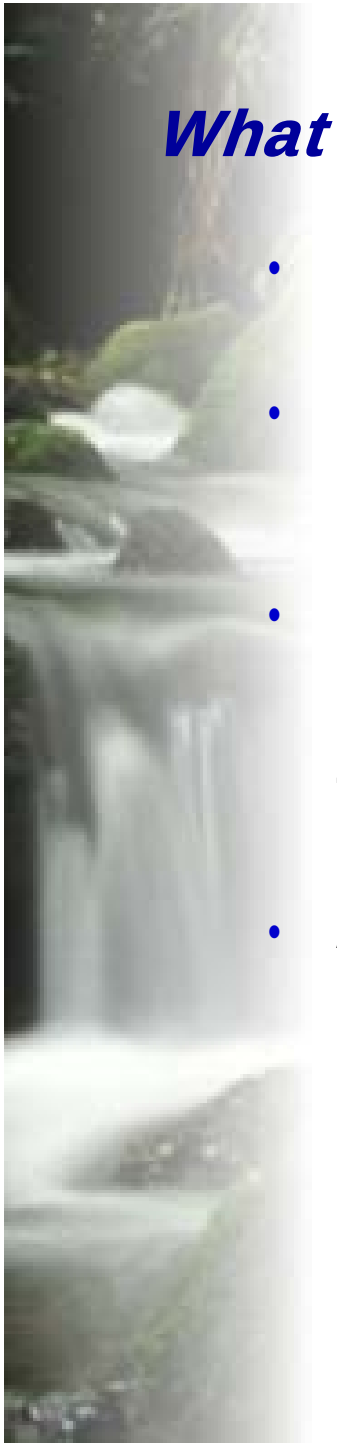
- **Instream uses include, but are not limited to:**
  - **Maintenance of fish and wildlife habitats.**
  - **Outdoor recreational activities.**
  - **Maintenance of ecosystems such as estuaries, wetlands, and stream vegetation.**
  - **Aesthetic values such as waterfalls and scenic waterways.**
  - **Navigation.**
  - **Instream hydropower generation.**
  - **Maintenance of water quality.**
  - **The conveyance of irrigation and domestic water supplies to downstream points of diversion.**
  - **The protection of traditional and customary Hawaiian rights.**



What are instream flow standards?

- **In addition, the instream flow standards must consider instream uses in light of existing and potential water developments including the economic impact of restriction of such use.**
- **Thus, in formulating an instream flow standard, the Commission must weigh the importance of the present or potential uses of water for noninstream purposes with the importance of instream uses.**

- **Note: There are also two different types of standards.**
  - **"Permanent" IFS are more permanent in nature and require public hearings prior to adoption.**
  - **Interim IFS are temporary in nature and do not require public hearings for adoption.**



What are the current instream flow standards?

- **Interim instream flow standards (IIFS) have been established statewide.**
- **However, the current IIFS is essentially "status quo", or the amount of water that was flowing in each stream on the date of adoption.**
- **In the Waiahole Contested Case Hearing, the Commission recognized that "at a minimum, retaining status quo helps to prevent any future harm to streams while the scientific basis for determining appropriate instream flow standards is developed."**
- **An applicant wanting to divert or restore a given stream must still file to amend the interim instream flow standard.**

Why are instream flow standards important?

- **Similar to sustainable yields, instream flow standards should provide an estimate of the amount of water that needs to remain in the stream to protect instream uses, while allowing for reasonable and beneficial offstream uses.**
- **In addition to protecting instream uses, instream flow standards should:**
  - **Identify streams best suited for preservation and/or restoration.**
  - **Provide County water supply departments with the tools to plan appropriately for long-term use and development of surface-water resources, as required by the Hawaii Water Plan.**
  - **Provide farmers, developers, and various other water users with the knowledge of where surface water might be available for development.**

Why not focus on a specific area?

- **The Waiahole Contested Case Hearing has reached the 10-year mark, and issues are still on remand.**
- **Much of staff time has been devoted to addressing an issue which amounts to the effects upon 4 streams.**
- **Nearly $1,000,000 dollars will be spent on additional studies to assess streamflow and biology for Waiahole, Waikane, Hakipuu, and Kahana.**
- **By focusing our efforts on only one area, we tend to lose sight of other stream issues across the State.**
- **Continuing to deal with “hot” issues case-by-case, we will be constantly playing “catch-up” as we attempt to develop instream flow standards for each unique situation.**

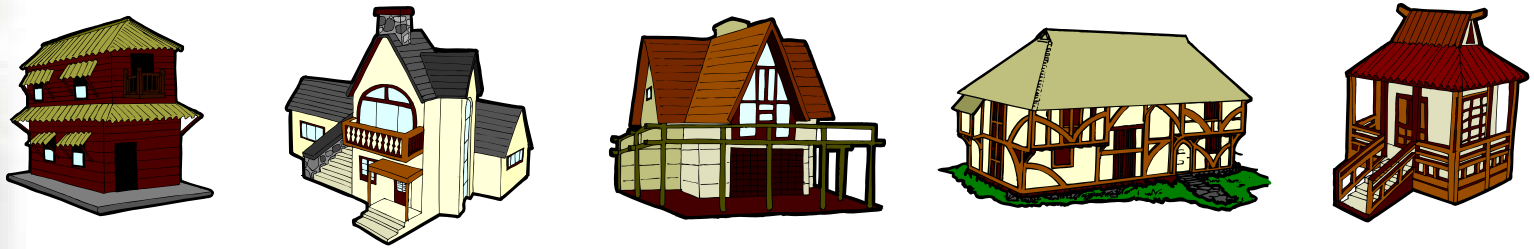
How should the Commission approach the situation?

- **The short-term solution is to develop a standardized methodology to establish interim instream flow standards statewide.**

How should the Commission approach the situation?

1. **A standardized method provides consistency in the process.**

- **Imagine trying to build 5 very different houses, without having any building codes. Each house may vary in design, cost, time, and materials.**



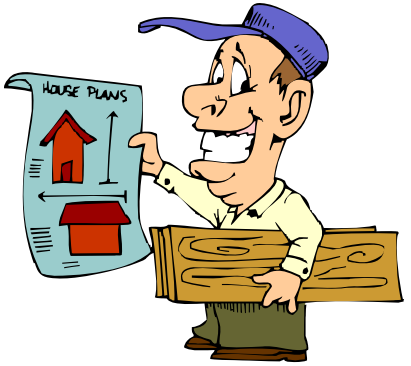
- **Now, imagine building 5 houses that are based on a single design, thereby saving time, cost, and materials.**

- **Having a single, standardized method helps to ensure that the standard would be consistently and efficiently applied to all situations.**

How should the Commission approach the situation?

2. **Having a clear method provides transparency to the process.**

- **Imagine being asked to build a house.**
- **If you don't go over the plans with the homeowner, the house might not be want they want, nor would they know how it was built.**



- **Developing a standardized method in consultation with stakeholder groups and community organizations, will help to ensure that everybody understands the process and how an IIFS can be established.**

How should the Commission approach the situation?

3. **Finally, setting the short-term goal of developing interim instream flow standards provides the Commission with the flexibility to make revisions to the methodology as needed.**

- **"Reach for the low-hanging fruit".**
- **IIFS can be adopted by the Commission, but easily changed should there be adjustments to the methodology.**
- **Public hearings are not required for IIFS, yet staff would be meeting with stakeholder and community groups throughout the development process.**
- **Going straight to establishing permanent instream flow standards would be more costly and much more time-consuming.**

Where does the Commission begin?

- **To develop interim instream flow standards statewide, the Commission must better understand the streamflow and conditions of all streams.**
- **There are an estimated 376 perennial streams.**
- **Approximately half of those streams have some type of gage data, including streams, ditches, surface-water, low-flow, and crest-stage gages.**
- **There are only 61 continuous surface-water stations currently active.**
  - **11 on Kauai**
  - **28 on Oahu**
  - **3 on Molokai**
  - **9 on Maui**
  - **10 on Hawaii**
- **It is important to remember that instream flow standards should be based on best available information.**

So, why is the Implementation Plan so important?

- **Dr. Jim Parham is currently developing a GIS-based stream hydrology model to assist the Commission in predicting streamflow for all streams statewide.**
- **In the case of hydrology and Dr. Parham's model, if there is better data, such as U.S. Geological Survey records or other studies, we would look at all sources, but ultimately rely on the best information.**
- **To aid in verifying Dr. Parham's model, as well as to improve the Commission's management of information for stream diversions, we need to develop the stream diversion database.**
- **Other sources of information, such as our stream channel alteration permits and requests for determination, will improve our understanding of stream conditions.**
- **Maintenance of these information databases is directly tied to the application forms and the processes through which they are implemented.**

So, why is the Implementation Plan so important?

- **In addition to the Commission's information needs, there are numerous stream-related activities occurring throughout the State, and many stakeholders and community groups are interested in assisting the Commission or conducting their own independent studies.**
- **However, there is much confusion surrounding instream flow standards and its role in surface-water management.**
- **Part of this plan is intended to improve coordination and education, not only among stakeholders and community groups, but also other agencies.**
- **Through greater awareness and education of instream flow standards, additional elements will certainly be identified and this Plan will need to be continually evaluated and updated.**
- **By adopting a "living document" approach and having an open process, we hope this Plan will further the efforts of the Commission's SPAM Program to meet its mission.**

Follow-on Actions

- **Convene a Stream Working Group meeting to present and discuss the SPAM Program Implementation Plan.**
- **Initiate the following actions:**
  - **Action #2: Revision and enhancement of application forms.**
  - **Action #3: Development of information databases.**
  - **Action #4: Development of GIS databases.**
  - **Action #5: Develop a standardized interim instream flow standard methodology.**
- **Brief the Commission on a interim instream flow standard methodology.**